Application No.: 10/594,152

Art Unit: 1762

Amendment

Attorney Docket No.: 063111

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently amended): A substrate having <u>an</u> organic thin film, characterized in that: a buffer layer and <u>the</u> organic thin film are sequentially deposited on a substrate, and said buffer

layer accelerates two dimensional growth of said organic thin film, and orients said organic thin

film flatly; wherein said buffer layer comprises acene system aromatics.

2. (Currently amended): The substrate having an organic thin film as set forth in claim 1,

characterized in that a layer easily oriented with said buffer layer is further inserted between said

substrate and said buffer layer.

3. (Currently amended): The substrate having an organic thin film as set forth in claim 1,

characterized in that said substrate is an insulating substrate, said buffer layer is acene system

aromatics or its derivative, said organic thin film is either C_n fullerene (where n is an integer of

60 or more), C_n fullerene derivative, or rubrene.

4. (Currently amended): The substrate having an organic thin film as set forth in claim 3,

characterized in that said insulating substrate is a sapphire substrate, said acene system aromatics

is either pentacene or pentacene fluoride, and said C_n fullerene is C₆₀.

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5. (Currently amended): The substrate having an organic thin film as set forth in claim 4,

characterized in that the surface of said sapphire substrate is flattening-treated, and said buffer

layer consisting of either pentacene or pentacene fluoride is deposited by molecular layer unit.

6. (Currently amended): A transistor provided with an organic thin film formed on a

substrate, characterized in that: said organic thin film is deposited on said substrate via [[the]] a

buffer layer accelerating two dimensional growth of said organic thin film, and orienting said

organic thin film flatly; wherein said buffer layer is acene system aromatics.

7. (Original): The transistor as set forth in claim 6, characterized in that a layer easily

oriented with said buffer layer is further inserted between said substrate and said buffer layer.

8. (Currently amended): The transistor as set forth in claim 6, characterized in that said

substrate is an insulating substrate, said buffer layer is acene system aromatics or its derivative,

said organic thin film is either C_n fullerene (where n is an integer of 60 or more), C_n fullerene

derivative, or rubrene.

9. (Original): The transistor as set forth in claim 8, characterized in that said insulating

substrate is a sapphire substrate, said acene system aromatics is either pentacene or pentacene

fluoride, and said C_n fullerene is C₆₀.

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10. (Original): The transistor as set forth in claim 9, characterized in that the surface of

said sapphire substrate is flattening-treated, and said buffer layer consisting of either pentacene or

pentacene fluoride is deposited by molecular layer unit.

11. (Withdrawn): A method of manufacturing a substrate having organic thin film,

characterized in that:

it includes a process of sequentially depositing a buffer layer and organic thin film on a

substrate, and

said buffer layer orients said organic thin film.

12. (Withdrawn): The method of manufacturing a substrate having organic thin film as

set forth in claim 11, characterized in that a layer easily oriented with said buffer layer is further

inserted between said substrate and said buffer layer.

13. (Withdrawn): The method of manufacturing a substrate having organic thin film as

set forth in claim 11, characterized in that said substrate is an insulating substrate, said buffer

layer is acene system aromatics or its derivative, said organic thin film is either C_n fullerene

(where n is an integer of 60 or more), C_n fullerene derivative, or rubrene.

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14. (Withdrawn): The method of manufacturing a substrate having organic thin film as

set forth in claim 13, characterized in that said insulating substrate is a sapphire substrate, said

acene system aromatics is either pentacene or pentacene fluoride, and said C_n fullerene is C₆₀.

15. (Withdrawn): The method of manufacturing a substrate having organic thin film as

set forth in claim 14, characterized in that the surface of said sapphire substrate is flattening-

treated, and said buffer layer consisting of either pentacene or pentacene fluoride is deposited by

molecular layer unit.

16. (Withdrawn): A method of manufacturing a transistor provided with organic thin film

formed on a substrate, characterized in that:

said organic thin film is deposited on said substrate via the buffer layer orienting said

organic thin film.

17. (Withdrawn): The method of manufacturing a transistor as set forth in claim 16,

characterized in that a layer easily oriented with said buffer layer is further inserted between said

substrate and said buffer layer.

18. (Withdrawn): The method of manufacturing a transistor as set forth in claim 16,

characterized in that said substrate is an insulating substrate, said buffer layer is acene system

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aromatics or its derivative, said organic thin film is either C_n fullerene (where n is an integer of

60 or more), C_n fullerene derivative, or rubrene.

19. (Withdrawn): The method of manufacturing a transistor as set forth in claim 18,

characterized in that said insulating substrate is a sapphire substrate, said acene system aromatics

is either pentacene or pentacene fluoride, and said C_n fullerene is C₆₀.

20. (Withdrawn): The method of manufacturing a transistor as set forth in claim 19,

characterized in that the surface of said sapphire substrate is flattening-treated, and said buffer

layer consisting of either pentacene or pentacene fluoride is deposited by molecular layer unit.

21. (Currently amended): A substrate having <u>an</u> organic thin film, characterized in that:

a buffer layer and an organic thin film are sequentially deposited on the substrate, said buffer

layer is acene system aromatics or its derivative, said buffer layer accelerates two dimensional

growth of said organic thin film, and orients said organic thin film flatly.

22. (Currently amended): A substrate having an organic thin film, characterized in that:

a buffer layer and an organic thin film are sequentially deposited on the substrate, said buffer

layer is acene system aromatics or its derivative, said organic thin film is either C_n fullerene

(where n is an integer of 60 or more), C_n-fullerene derivative, or rubrene, said buffer layer

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accelerates two dimensional growth of said organic thin film, and orients said organic thin film

flatly.

23. (Currently amended): A transistor, characterized in that: it is a transistor having an

organic thin film formed on a substrate, said organic thin film is deposited on said substrate via a

buffer layer consisting of acene system aromatics or its derivative, accelerating two dimensional

growth of said organic thin film, and orienting the organic thin film flatly.

24. (Currently amended): A transistor, characterized in that: it is a transistor having an

organic thin film formed on a substrate, said organic thin film is deposited on said substrate via a

buffer layer consisting of acene system aromatics or its derivative, accelerating two dimensional

growth of said organic thin film, and orienting the organic thin film flatly, and said organic thin

film is either C_n fullerene (where n is an integer of 60 or more), C_n fullerene derivative, or

rubrene.

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